

# Summary remarks

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## Outline

- 3<sup>rd</sup> harmonic project – bridge to ILC/PD SCRF technology
- Schedule and resources
- Benefits for the future projects:  
(ILC 3.9 GHz crab cavity, XFEL)

# Bridge to ILC/PD

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3<sup>rd</sup> harmonic cavity project is a bridge to ILC/PD SCRF technology

- ❑ Start before ILC technology choice
- ❑ ~3 years experience in SCRF (+CKM project)
- ❑ Developing SCRF infrastructure:  
material/surface control, BCP facility, HPWR, Design capabilities (RF, mechanical, thermal), RF measurements and tuning, macrophonics studies, Lorentz forces and compensation, HOM studies, HOM and main coupler development, etc.)
- ❑ Personal training
- ❑ Cavity/coupler testing infrastructure
- ❑ Data Analysis
- ❑ Developing SCRF expertise

# Schedule and resources

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Three different schedules was shown: optimistic, realistic and pessimistic. The assumptions are:

<i><b>optimistic</b></i>	<i><b>realistic</b></i>	<i><b>pessimistic</b></i>
<ul style="list-style-type: none"><li>■ 4 tech are 100% available</li><li>■ Add technicians are available to assemble /clean/process coupler</li><li>■ 4 cavity processed in parallel</li><li>■ No re-processing required</li><li>■ No systematic problem (HPR, UPW, etc.)</li><li>■ Horiz &amp; Vert. tests equivalent in time/effort</li><li>■ No delay with coupler</li></ul>	<ul style="list-style-type: none"><li>■ Vacations/sick = 3wks</li><li>■ 1 add. processing /test per cavity = 8wks</li><li>■ Systematic failure /delay = 3wks</li><li>■ Add. horizontal test = 4wks</li></ul>	<ul style="list-style-type: none"><li>■ Shutdown = 14wks</li><li>■ 1 add. processing /test per cavity = 8wks</li></ul>
Completion: January 2007	Completion: April 2007	Completion: Nov,2007

# Resources

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To achieve realistic schedule need additional resources:

- No shutdown obligations (14 wks delay)
- +2 additional technicians (cavity processing/assembly, cryomodule)
- Additional resources for design work  
(PPD: 1Eng+2 drafters put back to project  
TD – 3 contracted designers)

# Benefits for the future projects

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- European XFEL needs 3.9 GHz cavities (12)
- ILC: Crab-crossing 3.9 GHz deflecting cavities